DOCUMENT RESUME

ED 383 124 EC 303 935

AUTHOR King-Debaun, Pati
TITLE Merging Whole Language and Technology: Strategies for Children with Severe Disabilities.
PUB DATE 5 Apr 95
NOTE 9p.; Paper presented at the Annual International Convention of the Council for Exceptional Children (73rd, Indianapolis, IN, April 5-9, 1995).
PUB TYPE Guides - Classroom Use - Teaching Guides (For Teacher) (052) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Augmentative and Alternative Communication; Communication Aids (for Disabled); *Communication Disorders; *Computer Oriented Programs; Early Childhood Education; Language Acquisition; Literacy Education; Microcomputers; Physical Disabilities; Reading Material Selection; *Severe Disabilities; *Speech Impairments; Teaching Methods; *Whole Language Approach

ABSTRACT

Incorporating augmentative and alternative communication (AAC) systems and microcomputers into whole language learning activities for children with severe physical and speech impairments is discussed. Six typical strategies of whole language programs are reviewed. Ways to provide students with severe disabilities access to these programs are considered, such as aided language stimulation, a total communication environment, and repeated reading opportunities. Specific activities using AAC systems and microcomputers are suggested for students at the preschool, kindergarten, and first grade levels. Titles of instructional materials and software and their publishers are included. A form for identifying books that promote beginning communication and language learning concludes the paper. (Contains 21 references.) (SW)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED 383 124

Merging Whole Language and Technology: Strategies for Children with Severe Disabilities

Pati King-DeBaun, M.S. CCC-SLP
P.O. Box 3358
Park City,UT 84060

For the severely physically and communicatively challenged individual few options exist to explore and expand literacy skills. The importance of facilitating language learning and creativity in the early years to enhance emergent literacy skills is well documented with typical children and visible in the whole language type teaching philosophies which exist today. Each print experience a child encounters sets the stage for further development and growth. Bedtime stories, cloth books, early scribbling, helping mom cook from a cookbook, and writing notes to dad are among the many early print experiences children encounter. Opportunities to explore and use books, writing/drawing tools and a variety of objects/materials for sharing experiences and ideas are the beginning roads which facilitate risk taking, creativity and independent learners. An increasing amount of literature is suggesting that children with severe physical and/or communicative challenges receive the same opportunities as their typical peers. Fitting emergent literacy and early literacy skills however into the busy schedules of young special needs children can be difficult. Updating communication systems, using and learning appropriate software becomes more complicated and using what is available "getting into a rut" becomes a necessity. In these situations, child with severe speech impairments and physical impairments become passive observers rather than active participants.

Several factors seem to play a key role in limiting the active participation of children who have severe speech and physical disabilities. First, the lack of operational and linguistic competencies with current AAC systems often limits young AAC users. In many instances the novice augmentative communicator has not yet mastered all the vocabulary available on his/her system. Participants will learn through demonstration how a variety of tools, including microcomputers and light technology need to be provided to supplement existing systems. In addition participants will learn how a whole language approach can simplify this process. In other cases, a child may be using a lighter technology system while waiting for the funding of a more sophisticated system. Designing overlays, using a variety of inexpensive light tech systems, pairing light tech systems with microcomputer use and the careful planning of activities will be demonstrated. Another child may have learned the extensive vocabulary in their AAC system; however, may be quite slow at accessing the device through single switch entry. Participants will learn how to stretch the design features of devices and software . Professionals all too often blame problems in reading and writing on the disability rather than limited learning opportunities. (Koppenhaver & Yoder, 1990). Participants will learn what software and technologies are available and advance uses of these systems. A child's ability to explore emerging literacy artifacts may be directly related to his or her motoric problems and thus be viewed as barriers that cannot be superseded. (Pierce, P. & Mcwilliam, P. 1993) Finally, participants will learn how to make light tech physical modifications and learn about what high tech peripherals a are available for microcomputers.

Opportunities are presented to these children less frequently because of the limits of a their systems not their abilities. Providing natural opportunities, not excuses, for consistent practice of skills necessary to enhance literacy development is essential. Incorporating augmentative communication systems and microcomputers into activities can be a fun and beneficial experience for all participants.

EC 303 935

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☑ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
Pati King-DeBaun

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC).

BEST COPY AVAILABLE

The following strategies are typical of whole language programs:

I. Shared Readings
Shared readings provide the teacher with opportunities to model story language, prose, inflection, teach prediction skills, encourage participation, and develop children's concepts about print. The teacher guides the children through the reading of a story. The story is read multiple times. Gradually children participate more and more until they can read the story independently.

II. Skill Development
We understand that repeated reading opportunities and active participation in the book reading process directly effect a child's literacy development as suggested in studies conducted with children without disabilities (Teale,1987, Teale&Sulzby,1991,) and children with disabilities(Koppenhaver,et. al.,1991) However,Blischak,1995,Foley,1993, and Foley &Eule, 1992, suggests that simply reading to children who have severe speech and physical impairments will not develop the important phonological awareness necessary for literate individuals. Several adaptations can be made to assure that children play an active role when participating in skill related activities.

III. Story Discussion An important part of story book reading is the opportunity for discussion. During story discussions children make predications, reflect on their own experiences and link story content to real life experiences. Review type questions should be avoided and more emphasis should be placed on open ended type questions.

IV. Encouraging Independent and/or Cooperative Story Reading/Listening
In any literacy program the ultimate goal is for children to become independent readers. Children need opportunities to explore familiar books and materials. Young children can often be observed "mock" reading their favorite books to a teddy , imaginary friend or themselves. In most whole language programs time is devoted to individual ,independent reading. Usually books that have been read multiple times in class, that have repeated and or predictable text and match the child's fluency/participation level are selected. Children with severe disabilities often miss out on these opportunities. Several adaptation are necessary so children can successful listen to and read familiar texts.

V. Art and Writing Connection
Although the discussion of art and art tools is beyond the scope of this presentation, participants should be aware of the careful link between art and writing. Children with severe disabilities often have very limited experiences in early drawing/scribbling. By encouraging drawing we are also encouraging children to learn how to use and manipulate the tools of writing. By admiring their works we are reinforcing the idea that their marks are valuable and have something to say to others. The difficulty for children with severe disabilities is that often they cannot create pictures or scribbles. As educators, it is extremely important that we begin to make adaptations and provide children with appropriate tools so children can express themselves on paper.

VI Extension Activities
Extension activities (i.e., drama,science,math,etc.)are an important link to any whole language program. These activities are beyond the scope of this presentation, however, graphs, charts, message boards, and special device features such as "go to" "themeing" or "branching" can be utilized to increase participation in these activities.

Creative solutions for providing students with severe disabilities enhanced access to a variety of activities within a whole language program can be accomplished through the following approaches:

- **Aided language Stimulation and a Total Communication Environment** (See Goossens,et.al. 1992 & Burkhart,L ,1993)

- **Selecting Books for Learning and Books for Enjoyment**
- **Repeated Reading Opportunities**
- **Physical Access to Appropriate Technology**
- **Planning and Organizing the Environment**
- **Providing Appropriate Models**

Within this presentation the following ideas or strategies will be shared with you to enhance the use of AAC systems and microcomputers in a whole language program. Three different students who have severe communication and physical disabilities will be the models for this presentation. Selected activities will be described using both high and light technology.

PRESCHOOL-*Sarah is 4 years old and included in a preschool program. Below are some options of how Sarah might participate in these activities.*

MORNING CIRCLE

The teacher uses a chart to identify who's at school and who's at home. The children do a counting activity with the teacher leading. Sarah could use:

Single switch counting with a device
Single switch counting with a loop tape and tape recorder

The class sings a song related to the story theme. Sarah could participate by:

Single switch with a loop tape and tape recorder
The teacher uses a song board to visually point out the language concepts
Choice board to make selections during song
Single switch and auditory scanning device to pick items

CENTER TIME

A variety of activities are planned for center time including play, storytime, gross and fine motor activities, etc. The following structured activities will be described. Typically the therapist, teacher, paraprofessional or assistant directs these activities with a small group of students.

Storytime

Several adaptations can be made so Sarah participates in storytime.

Books on slides (Creative Communicating, 801-645-7737)
Adapted Books with props (King-DeBaun,1990)
Loop tapes with repetitive lines
"Talk About-It Displays" to accompany the story(King-DeBaun,1995)
Device overlays that are story specific
Books on computers

Macintosh Software

Storytime Tales (single switch) (Creative Communicating, DJDE)
Storytime, Just for Fun for IntelliKeys (Creative Communicating, 801-645-7737)
Children's Treasury II (Queue,1-800-232-2224)
Create your own (authoring tools) IntelliPix, IntelliTools 510-528-0670
Hyperstudio,Roger Wagner Studios 619-442-0522)Speaking Dynamically (Mayer & Johnson Co., 619-481-2489)

Apple II Series

*Power Pad Software
*Storytime, Storytime, Just for Fun & Holiday Fun! PowerPad Series IIE &GS (Creative Communicating, 801-645-7737)
*PlayWare Series IIE &GS (Creative Communicating, 801-645-7737)
* Storytime, Storytime Just for Fun, & Holiday Fun! Single Switch SeriesGS (Creative Communicating, 801-645-7737)

Play
Adaptations are made so Sarah can successfully play with her peers. Structured play activities often relate to the story theme and can mimic actual stories.

Play boards and velcro™
- Hand mitt

COOKING ACTIVITY
Once or twice a month the teacher has a food preparation activity that is related to the story theme. Several adaptations are made so Sarah can actively participate in this activity.

Enlarged recipe cards with symbols to highlight steps (PCS Symbols- Mayer-Johnson Co. (1-619-550-0084)
Adapted Stamp base for cookie cutters (Creative Communicating)
Adapted rolling pins (King-DeBaun,1995)
Cooking Topic Setters

KINDERGARTEN- *Andy is five years old and included in a kindergarten class. Below are some options of how Andy might participate in these activities.*

MORNING TIME
Andy is the class messenger. It is his responsibility to tell the kitchen how many hot lunches there are. Andy could use the following adaptations to deliver this message.

Adapted Hallmark™Card
Write on Board
Loop tape with a tape recorder

Each morning the whole class participates in a story adventure activity. The story adventure typically relates to the story theme.

Using the Spinner Functions on Devices
Communication Displays for Story Adventures

SHARED READING
Three times per week Andy works in a small group with his therapist, assistant, or teacher, and two other children. The children who participate in this activity either vary on a weekly basis or are children who have been identified as needing extra support during this activity. A book, "Book for Learning" related to the class story theme and appropriate to Andy's participation level is selected . Several adaptations can be made so Andy can successfully participate:

See **STORYTIME-SARAH** for additional suggestions
Designing Overlays
a.Symbol displays
1. Word vrs. phrase
2. Grammatical forms and Questions
3. Printed word
4. Icons
b. Supplemental displays (comments and questions)

Two days per week Andy participates in the whole class shared reading activity. Typically the class stays on a story theme for 3 to 4 weeks, reading the same book for 1-2 weeks. Often the books read with the whole class are too difficult for Andy's participation level. The following adaptations however can be made so Andy experiences success during these activities. These strategies would only be appropriate for "Books for Enjoyment".

Using Communication Device Features
a. Book pages as display with "Hot spot"

b. Color coding displays with voice output
c. Using icons

CREATIVE WRITING/ART

The class is instructed to illustrate their favorite part of the story . Andy illustrates the story he has been reading in his small group the "Book for Learning". The following adaptations might might be made for Andy:

Adapted Stamps with story specific stamps (Creative Communicating)
KidPix and Ke:nx Setups

1ST GRADE- *Danny is six years old and included in a first grade classroom. Below are some options of how Sarah might participate in these activities.*

JOURNAL WRITING

Each morning the children in Danny's class write or draw in their journals. At the beginning of the school year Danny's teacher modeled journal writing for her students and gradually invited them to help her complete the task. Danny can successfully participate in this activity using the following strategies:

Device dictation
Supplemental Displays with a Communication Partner
Keroppi Day Planner (Big Top Productions, San Francisco, CA.) & Standard IntelliKeys Overlays(Intelli Tools, 1-800-899-6687)on the Macintosh
Ke:nx and Write Outloud (Don Johnston Dev. Equip. 1-800-999-4660)

SHARED READING- Same strategies as Andy.

SKILL DEVELOPMENT/STORY DISCUSSION

Following shared readings the children typically participate in activities which promote skill development. These activities are considered follow -up activities to story reading and typically take between 10 and 15 minutes maximum. Danny participates in small and large group skill development activities. The following adaptations would be considered for successful participation.

Designing Overlays
a. Incorporating skill related vocabulary onto displays or supplemental displays (i.e., top, bottom, up, down, etc.)
b. Incorporating sound play into overlay designs or supplemental displays
c. incorporating sound and alphabet exploration on displays
d. Personal Word Books
e. Theme specific dictionaries or word books
f. Classroom word books

Using Communication Device Features
a. The "speak" or "talk" key
b. Taking advantage of dynamic displays
c. Developing operational competence early (i.e. moving from spell to communication mode)

Providing "Light Tech" forms of participation
a. Head sticks
b. Light pointer
c. Hand pointers and mitts
d. Laser pointers

INDEPENDENT BOOK READING

Every day Danny's class has the opportunity to spend time in independent reading activities. The following adaptations can be made:

Light Tech Adaptations

a. Books on slides (Creative Communicating, 801-645-7737)
b. Video taped books
c. Taped books

Designing Overlays
a. shrink book pages

Using Special Device Features
a. "Go to" or Branching" functions (single switch)
b. Step scan (single switch)
c. Book pages as display with "Hot spot"
d. Color coding displays with voice output
e. Pop up books
*direct selection
*single switch with AlphaTalker

Computer Software
Macintosh Software
Storytime Tales (single switch) (Creative Communicating, DJDE)
Storytime, Just for Fun for IntelliKeys (Creative Communicating, 801-645-7737)
Living Books,Just Grandma & Me, The Tortoise and the Hare, etc. (Broderbond, 800-521-6263)
Overlays for Learning The Tortoise & The Hare (DJDE,800-828-2443)
Instant Access Overlays Sets for Living Books (IntelliTools)
Children's Treasury II (Queue, 1-800-232-2224)
Discis Books, Mud Puddle,Little Readers Collection,etc.(1-800-567-4321)
Casey and Clyde (DJDE, 800-828-2443)
Theme related software, Five Little Monkeys, Five Little Ducks (Creative Communicating, 801-645-7737)
Speaking Dynamically (Mayer & Johnson Co., 619-481-2489)
Create your own (authoring tools) IntelliPix, Intellitools 510-528-0670 Hyperstudio,Roger Wagner Studios 619-442-0522)

a. Apple II Series
*Power Pad Software
*Storytime, Storytime, Just for Fun & Holiday Fun! PowerPad Series IIE &GS (Creative Communicating, 801-645-7737)
*PlayWare Series IIE &GS (Creative Communicating, 801-645-7737)
*UCLA Intervention Program for Handicapped children IIE &GS(310-825-4821
* Storytime, Storytime Just for Fun, & Holiday Fun! Single Switch Series GS (Creative Communicating, 801-645-7737)
* Milliken Storybook Series(Milliken)
* Tim and the Cat Series (Hartley 800-247-1380)
* Using Authoring Tools (Toolkit for PowerPad,Dunamis 800-828-2443, Media Magic, Pelican 800-822-3475etc.)

CREATIVE WRITING

Danny's class is encouraged to rewrite one of the theme related stories they have been reading in class. Danny rewrites the story he has been reading in small group. Several options exist for his successful participation

Adapted stamps
Communication Overlays for Story Construction
Computer Software

Macintosh Software
* Ke:nx & Write Outloud (DJDE)
* Considerations & Adaptations to Writing Software (i.e. Kidworks II , Davidson, 800-545-7677, Imagination Express, Edmark, 800-426-0856)
* Storytime Construction Series 1(Creative Communicating)
* A Day at Play (DJDE)
*InteliKeys, Overlay Maker &IntelliTalk (IntelliTools)

Apple II Series
* Pelican Software (My Neighborhood, Mixed up Rhymes, Comic Book Maker)
* Adaptive Firmware Card & Dr Pete's Talk Writer (DJDE, Dr. Pete's Software, 619-222-2471)

References:

Blischak,D. (1995) Phonological awareness: Implications for Individuals with Little or No Functional Speech. Augmentative and Alternative Communication, 10:4, pp. 245-254.
Burkhart, L. (1993). Total augmentative communication in the early childhood classroom. Linda Burkhart, Creative Communicating,P.O.Box 3358, Park City, UT 84060.
Bos, B. (1991). Art: A practical guide for teaching young children. New York: Scholastic, Inc.
Coleman, P. (1992). Emergent Literacy and Augmented Communicators: Research and Practice. presented at Biannual ISAAC Conference, Philadelphia.
Cutting,B.(1985). Getting Started in Whole Language. San Diego: Wright Group.
Foley,B.(1993). The development of literacy in individuals with severe congenital speech and motor impairments. Topic in Language Disorders, 13(2),16-32.
Foley,B. & Eule, A. (1992, August) Literacy devlopment in AAC users: Integrating analytic and holistic approaches. Presentation at the Biennial Conference of the International Society for Augmentative Communication, Philadelphia, PA.
Goodman, K.(1986). What's Whole in Whole Language. New York: Scholastic.
Goossens' C., Crain, S. and Elder, P. (1992) Engineering the preschool environment for interactive, symbolic communication: 18 months to 5 years developmentally. Southeast Augmentative Communication Conference Clinician Series, 2430 11th Ave. North, Birmingham, AL 35234.
King-DeBaun (1990) Storytime, Stories, Symbols, and emregent Literacy Activities for Young Special Needs Children. Creative Communicating P.O.Box 3358, Park City, UT 84060.
King-DeBaun (1993) Storytime, Just for Fun! Creative Communicating P.O.Box 3358, Park City, UT 84060.
King-DeBaun ,P.(1994) Storytime, Holiday Fun! Creative Communicating P.O.Box 3358, Park City, UT 84060.
Koppenhaver, D. & Yoder, D. (1990, August) Classroom Interaction, Literacy Acquisition, and Nonspeaking Children with Physical Impairments. Paper presented at the biennial meeting of the ISAAC, Stockholm, Sweden.
Koppenhaver, D. et al. (1991) The implications of Emergent literacy Research for Children with Developmental Disabilities. American Journal of Speech Language Pathology, 1 (1), 38-44.
Koppenhaver, D. Coleman,P. Steelman,J., & Yoder, D. (1992). The Emergence of literacy Research in AAC: Methodological Issues and Research Priorities. Paper written for the ISAAC Research Symposium, Philadelphia, Pa.
Musselwhite,C. & King-DeBaun,P. (in progress) Emergent Literacy Fun, Merging Technology and Whole Language. Creative Communicating P.O.Box 3358, Park City, UT 84060.
Musselwhite, C. (1986) Adaptive Play for Special Needs children: Strategies to enhance communication and learning. Austin, Tx: Pro-Ed.
Musselwhite, C., et.al. (1993) RAPS: Reading Activities Project for older students. Phoenix, AZ: Southwest Human development, Creative Communicating P.O.Box 3358, Park City, UT 84060.
Pierce, P. & McWilliam, P. (1993). Emerging Literacy and Children withSSPI: Issues and possible Intervention Strategies. Topics in Language Disorders, 13 (2), 47-57.
Teal, W. (1987) Emergent literacy: Reading and writing development in early childhood. In J.E. Readence & R.S. Baldwin (ED.) Reasearch in literacy: Merging perspectives, Thirty-sixth yearbook of the National Reading Conference(pp.45-74). Rochester, NY: National Reading Conference.
Teal, W. & Sulzby, E. (Eds), (1986). Emergent Literacy: Writing and Reading. Norwood, NJ. Ablex.

"Books for Learning"

Finding Books that Promote Beginning Communication and Language Learning
(King-DeBaun, 1994)

Story or Book Title_____ **Author**_____

Does the selected book have:

☐ Simple repeated text or repeated lines (Yikes!, Gulp!, EIEIO!, Chick a Boom!)
or

☐ Predictable text (i.e. dirty shoes, dirty socks, etc.)
or

☐ Rhyme and rhythm

☐ Familiar and meaningful context (i.e. Stories based on familiar activities or routines the child engages in.)

☐ Large and simple text (i.e. Text that lends itself to choral reading by children who have low verbal skills or who are augmentative communicators)
or

☐ A vehicle to promote the child's language and communication goals through patterned text. (I.e., articulation, present progressive tense, past tense, pronouns, etc.)
or

☐ Text that can easily be adapted if not appropriate (i.e. adding repeated lines deleting text, adding language structures, etc.)

☐ Simple graphics which easily depict concepts

☐ A vehicle for using props (i.e. real or homemade objects)
List props

_____ _____ _____
_____ _____ _____
_____ _____ _____

☐ A vechicle for generating literacy related activities (i.e. art, song, play, etc.)
List Activities

_____ _____ _____
_____ _____ _____
_____ _____ _____

Revised from KIng-DeBaun,1993, Handout presented at Closing the Gap, Minneapolis, MN